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ABSTRACT

Advances in information technology are changing industrialized societies into knowledge societies. The end of the cold war has promoted development of a global economy. Growing ecological consciousness has necessitated that environmental knowledge become part of all education. As the need to remain competitive increases, a new balance in responsibility in the partnership between management and the work force has developed. Enabling people to cope successfully with anxiety and uncertainty has become one of the most important tasks of education. Learning to learn must become the overall objective of all education. All education, including vocational education and training (VET), must prepare young people for life by developing their intellect, aptitudes, and talents and by creating opportunities for them to reach their full potential. A new global movement toward new VET standards is evolving. The European Training Foundation, which was founded in 1994, has assisted Central and Eastern European countries in restructuring their VET systems by providing the following: information agencies (called observatories), an expert network to support development and implementation of VET standards, pilot projects in partner countries, tailored advice, and an information network. Much has already been done to improve VET globally; however, much more creativity and investment is needed. (MN)

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Challenges to Technical and Vocational Education

Second International UNESCO Congress on Technical and Vocational Education

Seoul, Republic of Korea, 26 – 30 April 1999

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Keynote – speech – together with Dr. Munther Al-Masri – first plenary session

April 26, 1999

by

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1. THINKING THE CHANGE - A CHALLENGE FOR VOCATIONAL EDUCATION

„When the wind of change blows, some build walls, others build windmills" (Chinese wisdom)

Change is the predominant global feature of the 90s, and it will remain the main characteristic of the next decade.

There are three pivotal developments of the past 20 years that have caused most of the change:

* **micro-processor technology** and its impact on information, communication, production, and work organisation; biotechnology and genetic technology
* **the end of the cold war** and the division of the world into blocs of capitalism and communism
* **growing ecological consciousness**

Technology

Information technology (IT) is at the root of a process of transformation in the course of which industrialised societies are changing into **„knowledge societies"** and the management of production into the management of knowledge. There will be less and less manual work while computers become the main tool catering for the information needs of all professions. As a result, letters and figures, into which all procedures have to be translated, become more and more important for all human activities at work and in private life.

A less divided world

The end of the division of the world has opened the borders to the free flow of capital, goods and information and to the unhindered travel of people in large, but not yet in all parts of the world. Going global is the challenge to entrepreneurs and, of course, to their employees. As an example, cross-border activities in a united Europe demand the same competencies in all participating countries, i.e. **language and more knowledge about partner countries, their economy, culture and their legal and social systems.**

Ecology

Growing ecological consciousness will become a very important economic factor in the foreseeable future. **Eco-knowledge** is an important part of it, but **eco-thinking** is even more important. It **has to be part of all education**, general and vocational.

All these changes cannot be mastered by curriculum revisions, new syllabuses or educational reforms. What we need are new ways of thinking. Of course, this is also an educational task.

Labor-management relations

As the value imperative to remain competitive has become more demanding, so there has been a corresponding increase in the capability expectations of the workforce.

There is a point in this development where **a new balance in responsibility in the partnership between management and the workforce** now tilts more towards the workforce than prevailed in the past. This is not the result of a power struggle but the consequence of inevitable changes in the organization of work. In several European countries these changes are also reflected in government policies and ultimately in what is expected of VET. Tri-partite bodies are responsible for VET-Standard development and implementation in many countries of the world. Thus, the ability of employers und trade unions to describe rather exactly what their needs are concerning the role and the competence profile of future skilled workers and employees has been developed and improved. The communication between the world of work and the world of education, which very often seems to be non-existent, has grown into a new culture within research institutes or employment offices where these tripartite bodies meet regularly.

2. EDUCATION AGAINST UNCERTAINTY AND ANXIETY

One of the most **dangerous consequences of fundamental changes** now prevailing in politics and, of course, in education is uncertainty and following this – **anxiety.** In Eastern Europe, where nearly all established frameworks and structures have fallen apart, uncertainty and anxiety are probably the prime reasons for the failure of leadership, but also in western industrialized countries on their way into knowledge societies, some of them with particularly high unemployment rates, as well as in Asian countries which are shaken by a threatening economic crisis or in Africa and South-America uncertainty and anxiety are well known companions for a majority of people.

Therefore, it is one of the most important tasks of education to enable people to cope successfully with uncertainty through

* **information and knowledge** about the reasons for the changes, including systems' knowledge (e.g. computer systems, banking systems, free-market systems)
* skills on how to gather and **select information and knowledge**, and how to use them in planning and decision-making processes
- **problem-solving and practical skills, social and team skills**
- **entrepreneurial skills**
- **the development of the learner`s personality** through general, vocational and professional education.

What education can do is to create the preconditions of change, to develop the potential for managing change and to foster positive thinking. What **it cannot do is to provide employment** for those who have been educated and trained, to secure parity of esteem and a balance between the haves and the have-nots within a country and amongst global players.
If education shall act successfully in this very important field, educators need the help of the whole society, not only parents. The corporate world and the trade unions have a responsibility for cooperation with the world of education for their own sake.

What contribution can **education** make **to globalisation** ? A simple answer would be: **tolerance and democratic convictions !** Yet, in our world, war is still seen as the ultimate act of politics. A main task of education, including vocational education and training, must surely be to maintain the freedom to hold diverse opinions regardless of political, religious and philosophical boundaries.

3. THE OVERALL OBJECTIVE - LEARNING TO LEARN

In the information driven world of work

* **computers are the common tool** for managers as well as for front line workers;
* **all information is being digitised** and transformed into computer-compatible **letters and figures;**
* the internet is established as a world-wide information web, using **English as the lingua franca** of the knowledge age.

As a consequence, mathematics, one`s own language and English are becoming more important for vocational education and training than many of the practical

skills that have traditionally been related to specialised training. Initial vocational education and training pursue in their turn the kind of educational objectives that have traditionally been the prerogative of general education.

They include

* **learning to learn** (on the job; integrating theory with practice; learning by reviewing practice; applying learning methods in practice; developing social capabilities that cannot be taught)
* **becoming a mature and responsible contributor** (acquiring overarching capabilities like acting in a group, thinking in process terms, taking responsibility for others and for one's own achievement)

The traditional boundaries between general and vocational education on the one hand and education and training on the other have become obstacles to learning for real life.

There is no one-way-road of learning transfer from the so-called industrialised countries to the so-called developing world. Those who believe that they already know the problems of tomorrow have already lost the learning competition.

4. THE YOUNG MUST SHAPE THE CHANGE

There is a widely shared consensus about the goals of education. It is **to prepare young people for life** by developing their intellect, their aptitudes and their talents; and to create opportunities for them to reach their full potential. But education should also enable them to earn their own living and take part in the democratic process.

All educational systems have to serve these purposes.

Vocational education, i.e. the education and training of skilled workers and employees, has to be broader and more diversified. Take for example:

- **a car mechanic** – s/he must have diagnostic skills and knowledge (computer literacy), be customer oriented (direct personal contact), have all the skills of the trade (high tech), must take into account the ecological effects of his/her work, be able to calculate the cost of a repair and, more generally, be conscious of adding value;
- **a farmer or horticulturist** must be knowledgeable in biology, chemistry, management, marketing, engineering (mechanical) and have customer orientation; s/he must be able to find and exploit niches in the market (e.g. value added products for hotels in the neighbourhood);

- **a worker in one of the growing service industries** e.g. in the tourist, hospitality or leisure industry can be a well educated and trained leisure manager with a broad cultural background and communication skills;
- **a health care assistant** in one of the broadest fields of services where people of all ages can perform full time or part-time services once they have access to adequate education and training.

The key to success in vocational education is to **create learning opportunities** through which people can develop their ability to learn autonomously and use what they have learned to make a difference in their workplace.
In Germany, government, employers and trade unions agreed in 1987 that all occupational VET-standards should include **the new overall objective which changed the former VET-paradigm:**

„A skilled worker/employee should be able to act independently in planning, executing and controlling his/her work task"

All new learning activities following this new paradigm have one characteristic in common: **the learner steps the into the centre of the learning process**, gathers information and, as far as possible, acts independently. The teacher/trainer also changes his/her role to become coach, advisor and tutor.

5. NEW VOCATIONAL EDUCATION AND TRAINING STANDARDS - A GLOBAL MOVEMENT

The changes in technology, business, politics and society, all make it necessary to re-examine the aims, contents, qualifications and methods of all educational systems. Will they help or hinder future developments? All over the world VET-standards are benchmarked, newly developed or revised. The setting of new educational standards is more than just another reform, it has become a movement. This new movement has been well described by our colleagues Marc Tucker and Judy Codding in their book **„Standards for our Schools"** (San Francisco, 1998).

The countries of Central and Eastern Europe and those that formed the former Soviet Union, the so-called „transform-states", are confronted with the most radical change that educational systems have ever had to endure, especially in such a short time. With the change in the overall philosophy from centralized planning to free markets, these countries have to build new vocational education systems and transform all occupational and professional standards and curricula. This endeavour needs solidarity and support.

The **EUROPEAN TRAINING FOUNDATION (ETF)**, based in Torino, Italy was founded in 1994 to support the Central and Eastern European countries to restructure their vocational education and training (VET) systems. ETF `s Advisory Forum embraces the member states of the EU and the countries of the former Eastern Bloc and – as of 1999 - the mediterranean countries of Africa and the Near East (MEDA-Programme 1999) as well as international institutions like CEDEFOP, the EU`s VET-center, UNESCO, ILO, the World Bank and European Employer and Trade Union Associations. The task of the Forum is to discuss the needs of the transform-states in the field of VET and advise the ETF Directorate and its Governing Board by defining adequate measures of support in its programme planning..

ETF responded to the different needs of partner states in Central and Eastern Europe (including the new independent Asian countries, that were part of the former USSR and Mongolia) by

- establishing information agencies, so-called **observatories,** which provide data about the preconditions for defining VET and labour market needs,
- creating an **expert network** to support partner states in developing and implementing VET –standards; a working group of the Advisory Forum was given this task,
- launching and monitoring **pilot projects in partner countries,**
- providing **tailor made advice** for partner cou ntries which start to develop VET-standards for the first time,
- implementing an **information network** between partner countries and EU-member states.

It is such a **VET-Broker /Agency /Network** which is needed for the worldwide promotion of education and training and I hope that this congress will bring about new ideas to form the nucleus of such a world center of excellence, which could be a joint venture of Unesco and ILO.

Common to all these developments in search for new vocational training systems, standards, parity of esteem and closer links between education and business is the need for **vocational education research.** The European Union is focussing on this very important factor in its vocational education promotion programmes in order to improve the data base for future oriented VET-planning processes, to better link learning in schools and at the workplace, to help teachers in coping with the large amount of new knowledge , new skills and new methods of teaching with the support of multimedia and setting new VET-standards. Vocational education research and development could also be a key **to innovative measures to make better use of informal learning achievements** for young and adult with little formal education.

There is a strong global move for building windmills but it will take a lot more creativity and investment in education as we have done so far to turn the vision **„education and training for all“** into reality.